REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action dated March 4, 2008. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

As outlined above, claims 11-16 stand for consideration in this application, wherein claims 11-15 are being amended. In addition, new claim 16 is hereby submitted for consideration.

All amendments to the application are fully supported therein. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

35 U.S.C. §101 Rejection

Claims 11-15 were rejected under 35 U.S.C. §101 on the grounds of the claimed invention being directed to non-statutory subject matter.

The court in *State Street Bank* held that an algorithm would be patentable if it is applied in a "useful" way. See *State Street Bank v. Signature Financial Group,* 149 F.3d 1368 (Fed. Cir. 1998). Also, the court in *In re Alappart* held that data transformed by a machine through a series of mathematical calculations to produce a smooth waveform display on a monitor constitutes a practical application of an abstract idea (a mathematical algorithm, formula, or calculation) because it produces "a useful, concrete and tangible result" – smooth waveform. See *In re Alappart*, 33 F.3d 1526, (Fed. Cir. 1994).

Here, claims 11-15 and new claim 16 are directed to a method which improves calculation performance in parallel-processing computer. In the conventional parallel computing method to perform Fourier transform of a data array, the transformations in the Y, X and Z directions can be carried out in processors in a completely independent way. In the permutation process carried out in the course of computing, however, every processor needs to transfer data to all other processors. It takes much more time to transfer data in comparison with the processing time itself. (See page 10, line 14-25 of the specification.)

The method as recited in claims 11-16 can increase efficiency of the computation including Fourier transformation with a parallel-processing computer. Claims 11-16 recite the transform of the data in a data array by a parallel computer, namely a machine through a series of mathematical calculations to produce Fourier transform of the data array in an efficient way. In the method as recited in claims 11-16, a data array is transformed into a data array in a different state, namely a Fourier transform of a data array, in an efficient way. It is a useful, concrete and tangible result in the field of data processing with a parallel computer. The method as recited in claims 11-16 constitutes a practical application of an abstract idea such as a mathematical algorithm or calculation.

Therefore, Applicants respectfully submit that claims 11-15 as amended and new claim 16 meet 35 U.S.C. §101 requirements. Accordingly, withdrawal of the rejection is respectfully requested.

Conclusion

In light of the above Amendments and Remarks, Applicants respectfully request early and favorable action with regard to the present application, and a Notice of Allowance for all pending claims is earnestly solicited.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and phone number indicated below.

Respectfully submitted,

Stanley P. Fisher
Registration Number 24,344

Juan Carlos A. Marquez
Registration Number 34,072

REED SMITH LLP
3110 Fairview Park Drive
Suite 1400
Falls Church, Virginia 22042
(703) 641-4200
July 15, 2008
SPF/JCM/YOM